Prior Art Express Search Guide

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This guide includes an overview of the IP.com Prior Art Express search facility, including syntax, available Boolean and position operators, and functions such as wildcards and numeric ranging. The Prior Art Express search performs a traditional text-based query directed at the non-patent, defensive publications stored in the IP.com Prior Art Database. The underlying keyword index used supports all languages. Disclosures published into the Prior Art Database become available in this index shortly upon completion of processing. You may print a copy of this paper for your personal reference.

Syntax Overview

A search request consists of a group of words of phrases linked by connectors such as and and or that indicate the relationship between them. Examples:

Apple and pear	Both words must be present
Apple or pear	Either word can be present
Apple w/ 5 pear	Apple must occur within 5 words of pear
Apple not w/ 5 pear	Apple must not occur within 5 words of pear
Apple and not pear	Only apple must be present
Name contains smith	The field name must contain smith

If you use more than one connector, you should use parentheses to indicate precisely what you want to search for. For example, apple and pear or orange could mean (apple and pear) or orange, or it could mean apple and (pear or orange).

Search terms may include the following special characters:

?	Matches any single character	appl? matches apply or apple
*	Matches any number of characters	appl* matches apply, application, or apples
%	Fuzzy search	ba%nana matches banana, bananna
#	Phonic search1	#smith matches smith, smythe
~	Stemming2	apply~ matches apply, applies, applied
~~	Inclusive numeric range	12~~24 matches 18
:	Variable term weighting	apple:4 w/5 pear:1

Words and Phrases

You do not need to use any special punctuation or commands to search for a phrase. Simply enter the phrase the way it ordinarily appears. You can use a phrase anywhere in a search request. Example:

apple w/5 fruit salad

Punctuation inside of a search word is treated as a space. Thus, can't would be treated as a phrase consisting of two words: can and t. 1843(c)(8)(ii) would become 1843 c 8 ii (four words).

Note that all words, regardless of their “semantic value,” are indexed. This includes words that are sometimes considered “noise,” such as the, a, or of. Therefore, searching for the theory of relativity is likely to return better results when expressed as theory w/2 relativity.

Using the * wildcard character near the beginning of a word may noticeably slow searches.

Special Characters (% # and ~)

If your search contains any of the following special characters, they may impact your search results: % # ~. These special characters perform the following functions:

%	Fuzzy searching
#	Phonic searching
~	Stemming

It is recommended that you omit these special characters from your search queries if you do not want them impacting your results by performing the functions outlined above.

Numeric Range Searching

A numeric range search is a search for any numbers that fall within a range. To add a numeric range component to a search request, enter the upper and lower bounds of the search separated by ~~ like this:

apple w/5 12~~17

This request would find any document containing apple within 5 words of a number between 12 and 17. Numeric range searches only work with positive integers. A numeric range search includes the upper and lower bounds (so 12 and 17 would be retrieved in the above example).

For purposes of numeric range searching, decimal points and commas are treated as spaces and minus signs are ignored. For example, -123,456.78 would be interpreted as: 123 456 78 (three numbers).

Variable Term Weighting

When the search facility sorts search results after a search, by default all words in a request count equally in counting hits. However, you can change this by specifying the relative weights for each term in your search request, like this:

apple:5 and pear:1

This request would retrieve the same documents as apple and pear but, the search facility would weight apple five times as heavily as pear when sorting the results.

Field Searching

When the search facility indexes packages or publications, it saves certain information so that you can perform searches limited to a particular field. For example, suppose the database has a NAME field and a DESCRIPTION field. You could search for apple in the NAME field like this:

NAME contains apple

Field searches can be combined using and, or, and not, like this:

(CITY contains (boston or york)) and (ADDRESS contains (washington))

The parentheses are necessary to ensure that the search facility interprets the search request correctly.

IP.com Prior Art Database Field Names

The IP.com Prior Art Database contains some information that may be utilized using field searching. Note that the inclusion of these fields and the quality of the information they contain is decided by the submitter of the document, not by IP.com. The fields are as follows:

Field	Description
TITLE	Generally, submitters provide descriptive titles for documents.
ABSTRACT	Most, but not all, documents have useful abstracts.
COPYRIGHT	Some documents have copyright information; the format of the information is unpredictable.
RELATED_PEOPLE	This field includes all information regarding each related person. A related person, for example, could be the author or inventor of the disclosure. Some documents contain related people information.
RELATED_DOCUMENTS	Includes all information regarding each related document. A related document may include a patent application number for example. Few documents contain related document information.
ORIGINAL_DATE	The ORIGINAL_DATE field contains month and year information in the form YYYYMM (YYYY is the year, MM is the month). This is the month and year the document originally appeared in print if it was not originally published using the Prior Art Database or it repeats the Prior Art Database month and year of publication. The format allows the use of the ~~ numeric range operator.

For example, to search for all documents from the year 2004 which contain the term IBM, use the query:

IBM and (original_date contains 200401~~200412)

The AND Connector

Use the AND connector in a search request to connect two expressions, both of which must be found in any document retrieved. For example:

apple pie and poached pear	Retrieve any document tat contains both phrases
(apple or banana) and (pear w/5 grape)	Retrieves any document that (1) contains either apple or banana and (2) contains pear within 5 words of grape

The OR Connector

Use the OR connector in a search request to connect two expressions, at least one of which must be found in any document retrieved. For example:

apple pie or poached pear	Retrieves any document that contains apple pie, poached pear, or both

The W/# Connector

Use the W/# connector in a search request to specify that one word or phrase must occur within some number of words or the other. For example:

apple w/5 pear	Retrieves any document that contains apple within 5 words of pear

The following are examples of search requests using W/#:

(apple or pear) w/5 banana (apple w/5 banana) w/10 pear (apple and banana) w/10 pear

Some types of complex expressions using the W/# connector will produce ambiguous results and should not be used. The following are examples of ambiguous search results:

(apple and banana) w/10 (pear and grape) (apple w/10 banana) w/10 (pear and grape)

In general, at least one of the two expressions connected by W/# must be a single word or phrase or a group of words and phrases connected by OR. Examples:

(apple and banana) w/10 (pear or grape) (apple and banana) w/10 orange tree

The NOT and NOT W/# Connectors

You may use NOT in front of any search expression to reverse its meaning. This allows you to exclude documents from a search. Example:

apple sauce and not pear

NOT standing alone can be the start of a search request. For example, the following would retrieve all documents that did not contain pear:

not pear

If NOT is not the first connector in a request, you need to use either AND or OR with NOT:

apple or not pear
not (apple w/5 pear)

The NOT W/ ("not within") operator allows you to search for a word or phrase not in association with another word or phrase. Example:

apple not w/20 pear

Unlike the W/ operator, NOT W/ is not symmetrical. That is, apple not w/20 pear is not the same as pear not w/20 apple. In the apple not w/20 pear request, the facility searches for apple and excludes cases where apple is too close to pear. In the pear not w/20 apple request, the facility search for pear and excludes cases where pear is too close to apple.

Non-English Language Searching

As noted earlier, the search facility natively operates in English. However, searching for any language is fully enabled. Simply enter the non-English words (containing the appropriate characters) as your normally would. It is therefore possible to search for a German-titled document like this:

title contains (ortsabhängige w/5 teilnehmerverfügbarkeit)

To fully utilize the capabilities of the search facilities, note that the individual characters in all Eastern language (Chinese, Korean, and Japanese) documents are indexed as individual words. In Japanese, this is true regardless of whether the actual word is a combination of Kata and Kana characters.

Credits

This document was adopted from the dtSearch Version 6 User's Manual, Chapter 6 "Search Requests." dtSearch's Text Retrieval Engine powers IP.com's online full-text search facility.

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